

Claims

- [c1] 1. A hands-free amplifier for a hand-held communication device having a connector thereon, the hands-free amplifier comprising of:
- a main body;
 - a substrate board inside the main body, wherein the substrate board has a signal connector with an opening end on the main body suitable for engaging with a connector on a hand-held communication device;
 - a voice amplifier inside the main body, wherein the voice amplifier and the substrate board are electrically connected to transmit signals;
 - a voice receiver inside the main body, wherein the voice receiver and the substrate board are electrically connected to transmit signals; and
 - a power source electrically connected to the substrate board inside the main body to provide electrical power for driving the substrate board.
- [c2] 2. The hands-free amplifier of claim 1, wherein the voice amplifier includes a loudspeaker.
- [c3] 3. The hands-free amplifier of claim 1, wherein the voice receiver includes a microphone.
- [c4] 4. The hands-free amplifier of claim 1, wherein the power source includes a replaceable battery pack.
- [c5] 5. The hands-free amplifier of claim 1, wherein the power source includes a rechargeable battery pack.
- [c6] 6. The hands-free amplifier of claim 1, wherein the hand-held communication device includes a mobile telephone.
- [c7] 7. The hands-free amplifier of claim 1, wherein the substrate board further includes a voice control circuit for controlling the reception of the voice receiver and the transmission of the voice amplifier and adjusting voice volume.
- [c8] 8. The hands-free amplifier of claim 1, wherein the power source includes a battery pack having at least one battery.

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- [c9] 9. A hands-free amplifier for a hand-held communication device having a connector thereon, the hands-free amplifier comprising of:
a main body;
a substrate board inside the main body, wherein the substrate board has a signal connector with an opening end on the main body suitable for engaging with a connector on a hand-held communication device;
a voice receiving/amplifying device having electrical signal connection with the substrate board inside the main body; and
a power source electrically connected to the substrate board inside the main body to provide electrical power for driving the substrate board.
- [c10] 10. The hands-free amplifier of claim 9, wherein the voice receiving/amplifying device includes a loudspeaker having both voice-amplifying and voice-receiving capabilities.
- [c11] 11. The hands-free amplifier of claim 9, wherein the power source includes a replaceable battery pack.
- [c12] 12. The hands-free amplifier of claim 9, wherein the power source includes a re-chargeable battery pack.
- [c13] 13. The hands-free amplifier of claim 9, wherein the hand-held communication device includes a mobile telephone.
- [c14] 14. The hands-free amplifier of claim 9, wherein the substrate board further includes a voice control circuit for controlling the reception of the voice receiver and the transmission of the voice amplifier and adjusting voice volume.
- [c15] 15. The hands-free amplifier of claim 9, wherein the power source includes a battery pack having at least one battery.